

AMENDMENTS TO THE CLAIMS
(with complete listing)

1. (Currently amended) A method for non-temporarily coupling a plurality of risers or umbilicals having lower ends fixed to an area of the sea floor to a floating vessel having a hull with a keel and moored generally above said area for use during everyday ordinary vessel operation, the method comprising the steps of,

enduringly suspending said risers or umbilicals from an elevation above said hull, and

laterally supporting said risers or umbilicals at points along the perimeter of said hull.
2. (Previously presented) The method of claim 1 further comprising the step of,

laterally supporting said risers or umbilicals below the waterline.
3. (Previously presented) The method of claim 1 further comprising the step of,

laterally supporting said risers or umbilicals at an elevation generally corresponding to the elevation of said keel.
4. (Previously presented) The method of claim 1 further comprising the step of,

laterally supporting said risers or umbilicals at outboard-facing surfaces of said hull.
5. (Previously presented) The method of claim 1 further comprising the step of,

laterally supporting said risers or umbilicals at inboard-facing surfaces of said hull.
6. (Previously presented) The method of claim 1 further comprising the step of,

laterally supporting said risers or umbilicals at surfaces of a moonpool in said vessel.
7. (Previously presented) The method of claim 1 further comprising the steps of,

providing a bearing at each of said points, and

allowing axial movement of said riser relative to said vessel.
8. (Previously presented) The method of claim 1 wherein said step of laterally supporting said risers or umbilicals further comprises the step of,

providing a plurality of keel guides disposed at said points.
9. (Previously presented) The method of claim 8 further comprising the step of,

allowing side entry of one of said risers or umbilicals into at least one of said keel guides.

10. (Previously presented) The method of claim 8 further comprising the step of, allowing vertical entry of one of said risers or umbilicals into at least one of said keel guides.

11. (Original) The method of claim 1 wherein said suspending further comprises the steps of, tensioning said risers or umbilicals, and allowing said risers or umbilicals to move axially with respect to said vessel.

12. (Original) The method of claim 1 further comprising the step of, suspending said risers or umbilicals with a generally vertical orientation.

13. (Original) The method of claim 1 further comprising the step of, suspending said risers or umbilicals from an elevation above the waterline.

14. (Previously presented) The method of claim 1 further comprising the step of, said risers or umbilicals by a spring.

15. (Cancelled)

16. (Currently amended) A method for non-temporarily coupling a plurality of risers or umbilicals having lower ends fixed to an area of the sea floor to a floating vessel having a submerged hull with a keel and moored generally above said area for use during everyday ordinary vessel operation, the method comprising the steps of,

enduringly suspending said risers or umbilicals from an elevation above said keel, and laterally supporting said risers or umbilicals in vertical passages formed through said hull.

17. (Previously presented) The method of claim 16 further comprising the steps of, providing a bearing in each of said passages, and

- allowing axial movement of said riser relative to said vessel.
18. (Original) The method of claim 16 wherein said suspending further comprises the steps of,
- tensioning said risers or umbilicals, and
- allowing said risers or umbilicals to move axially with respect to said vessel.
19. (Original) The method of claim 16 further comprising the step of,
- suspending said risers or umbilicals with a generally vertical orientation.
20. (Original) The method of claim 16 further comprising the step of,
- suspending said risers or umbilicals from an elevation above the waterline.
21. (Previously presented) The method of claim 16 further comprising the step of,
- suspending said risers or umbilicals by a spring.
22. (Cancelled)
23. (Currently amended) A floating vessel comprising,
- a submerged buoyant hull having a keel,
- a column having a lower end coupled to said hull, said column extending above the waterline,
- a deck coupled to an upper end of said column,
- a mooring device having an upper end coupled to said hull and a lower end coupled to the seabed,
- a keel guide having a vertically oriented generally cylindrical passage therein coupled to an exterior outboard-facing surface of said hull,
- a tensioner coupled to said vessel and disposed at an elevation above said hull, and
- a riser or umbilical having a lower end coupled to the seabed and an upper end enduringly coupled to said tensioner, said riser or umbilical passing within said passage of said keel guide.

24. (Original) The vessel of claim 23 wherein,
said mooring device is generally vertically oriented and tensioned by said buoyant hull.
25. (Original) The vessel of claim 23 wherein,
said riser or umbilical is generally vertically oriented and tensioned by said buoyant hull.
26. (Previously presented) The vessel of claim 23 further comprising,
a keel joint disposed between said riser or umbilical and said keel guide, said keel joint having a bearing disposed adjacent to said riser or umbilical, wherein said bearing is designed and arranged to provide lateral support to said riser or umbilical while allowing said riser or umbilical to move in a longitudinal direction within said keel guide.
- 27-29. (Cancelled)
30. (Original) The vessel of claim 23 wherein,
said keel guide has a slot which communicates with said passage and which is designed and arranged to allow side entry of said riser or umbilical.
31. (Original) The vessel of claim 23 wherein,
said keel guide is disposed at an elevation generally corresponding to the elevation of said keel.
32. (Original) The vessel of claim 23 wherein,
said keel guide is disposed at an elevation generally corresponding to the elevation of said upper end of said mooring device.
33. (Cancelled)
34. (Previously presented) The vessel of claim 23 wherein,
said tensioner is disposed above the waterline.
35. (Previously presented) The vessel of claim 23 wherein,

said tensioner is disposed on said deck.

36. (Currently amended) A floating vessel comprising,
a submerged buoyant hull having a keel,
a column having a lower end coupled to said hull, said column extending above the waterline,
a deck coupled to an upper end of said column,
a mooring device having an upper end coupled to said hull and a lower end coupled to the seabed,

first and second apertures ~~an aperture each being~~ vertically formed through said hull and having a closed vertical periphery,

first and second tensioners ~~a tensioner~~ coupled to said vessel and disposed at an elevation above said hull, ~~and~~

a first riser or umbilical having a lower end coupled to the seabed and an upper end enduringly coupled to said first tensioner, said first riser or umbilical passing within said ~~passage of said keel guide, first aperture, and~~

a second riser or umbilical having a lower end coupled to the seabed and an upper end enduringly coupled to said second tensioner, said second riser or umbilical passing within said second aperture.

37. (Currently amended) The vessel of claim 36 wherein,
said mooring device is generally vertically oriented and tensioned by said buoyant hull.

38. (Cancelled)

39. (Currently amended) The vessel of claim 36 further comprising,
a keel joint disposed between said first riser or umbilical and said first aperture, said keel joint designed and arranged to provide lateral support to said first riser or umbilical

while allowing said first riser or umbilical to move in a longitudinal direction within said first aperture.

40. (Cancelled)

41. (Currently amended) The vessel of claim 36 wherein,
said first tensioner is disposed above the waterline.

42. (Currently amended) The vessel of claim 36 wherein,
said first tensioner is disposed on said deck.

43. (Cancelled)

44. (New) A method for non-temporarily coupling a plurality of risers or umbilicals having lower ends fixed to an area of the sea floor to a floating vessel having a hull with a keel and moored generally above said area for use during everyday ordinary vessel operation, said hull defining a vertical centerline, the method comprising the steps of,
enduringly suspending said risers or umbilicals from an elevation above said hull, and
laterally supporting said risers or umbilicals at points along an outer surface of said hull which faces away from said vertical centerline.